

ELECTRODE WIRE FOR WIRE ELECTRIC DISCHARGE MACHINING

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Abstract of JP2002137123

PROBLEM TO BE SOLVED: To provide an electrode wire for wire electric discharge machining capable of realizing a higher speed than a conventional electrode wire to reduce machining cost. **SOLUTION:** In this electrode wire for wire electric discharge machining in which a core member is made of copper zinc alloy containing zinc of 15 to 30 wt.%, an outer layer 3 is formed with a thickness of 6% or more of a finish outside diameter of high zinc brass having zinc concentration of 48 to 68 wt.% on a surface of the core member, and a zinc covered layer is provided with a thickness of 0.5 to 2% of a total finish outside diameter as an outermost layer 4 at its outer periphery furthermore, it is possible to realize a higher machining speed at which a workpiece is cut by 20% or more than the conventional wire when, in particular, a dielectric constant of the electrode wire calculated according to an calculation expression of electrode wire dielectric constant becomes 23% or more, preferably, it becomes 29% or more in the case of copper alloy when the core member contains zinc of 15 wt.%, and it becomes 27% or more in the case of copper alloy when the core member contains zinc of 20 wt.%, and it becomes 24% or more in the case of copper alloy when the core member contains zinc of 30 wt.%.

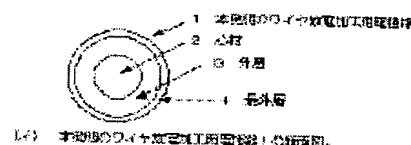
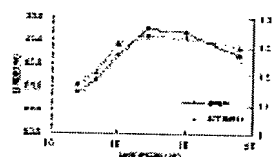
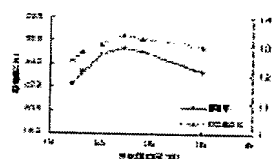


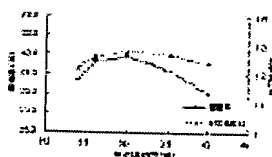
図1 本発明のワイヤ放電加工用電極線の断面図。



図(a) 本発明のワイヤ放電加工用電極線の断面図(1)の厚さ(μm)と、電極線の誘電率(ε)との関係を示す図。



図(b) 本発明のワイヤ放電加工用電極線の断面図(2)の厚さ(μm)と、電極線の誘電率(ε)との関係を示す図。



図(c) 本発明のワイヤ放電加工用電極線の断面図(3)の厚さ(μm)と、電極線の誘電率(ε)との関係を示す図。

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